

TAKAHASHI

Appl. No. 09/271,905

Response to Office Action dated September 26, 2003

REMARKS

Reconsideration and allowance of the subject patent application are respectfully requested.

Applicant acknowledges with appreciation the indication that claims 5 and 12 are allowed.

Claims 1-4, 6-11, 13, 14 and 15-34 were rejected under 35 U.S.C. Section 102(b) as allegedly being "anticipated" by Kim (JP 9-074569).¹ Applicant traverses the rejection of these claims and the characterizations of Kim as showing the features of the claims.

Kim discloses an apparatus for compressing a video signal that includes a motion estimator 15 having a candidate motion vector determinator 20 (the details of which are shown in Figure 2) and an optimum motion vector determinator 30 (the details of which are shown in Figure 3). With reference to Figure 2, a signal from frame memory 95 is supplied to search region formation section 22, which defines a corresponding search region to the search block with a certain size, shape and search pattern. After the search region is determined, the search region data is applied to candidate block formation sections 24-1 to 24-n. At each of the candidate block formation sections 24-1 to 24-n, a candidate block of an identical size to that of the search block is generated within the search region, and pixel data of each candidate block is outputted therefrom to each of the block matching sections 26-1 to 26-n. The relative displacements of the candidate blocks from the location of the search block of the current frame are also outputted from candidate block formation sections 24-1 to 24-n to a comparator 28 and to a multiplexer 29 as displacement vectors DV (24-1) to (24-n) respectively. Comparator 28 selects M error functions from the block matching sections 26-1 to 26-n and multiplexer 29 chooses the displacement vectors of the candidate blocks that correspond to the selected error functions. The displacement vectors chosen by multiplexer 29 are supplied to the optimum motion vector determinator 30, which includes a multiplexer 39 that chooses one of the candidate motion vectors as an optimum motion vector.

¹ A machine translation of the JP 9-074569 from the JPO website was kindly provided by the Examiner. While this translation appears to correspond to the related U.S. patent also kindly provided by the Examiner, Applicant does not admit that the machine translation is an accurate and/or complete translation of the Japanese-language document.

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Among other things, Kim does not disclose the search features described in the rejected claims and therefore cannot anticipate these claims. For example, claims 1, 7 and 15 each describes generating devices or vector generators that generate respective movement vectors using different search ranges and accuracies, and a selecting device that selects one of the generated movement vectors. Similarly, claims 8, 14 and 20 each describes generating processes that generate respective movement vectors using different search ranges and accuracies, and a selecting process that selects one of the movement vectors. In contrast, in the system disclosed in Kim, the search formation section 22 uses one search region and the optimum motion vector is selected from among vectors generated using this one search region. There is no disclosure in Kim of generating movement vectors using, for example, different search ranges or accuracies or of selecting from among such movement vectors.

The dependent claims are believed to be allowable because of their dependencies and because of the other patentable features recited therein. As such, Applicant does not acquiesce in the assertions in the office action that the features of these dependent claims are shown in Kim. By way of example, not limitation, claims 2 and 9 each calls for generating a first movement vector with a preset first range as the search range and generating a second movement vector at a search accuracy lower than that of the first movement vector, with a preset second range wider than the first range as the search range. Because, as noted above, Kim uses one search region, there is no disclosure of lower search accuracies and wider ranges as described in claims 2 and 9.

The pending claims are believed to be allowable and favorable office action is respectfully requested.

Respectfully submitted,

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